

# Korean Journal of Chemical Engineering

February 2020  
Volume 37, Number 2

Korean J. Chem. Eng. 37(2) 189-386  
Print ISSN 0256-1115  
Online ISSN 1975-7220

## INVITED REVIEW PAPER

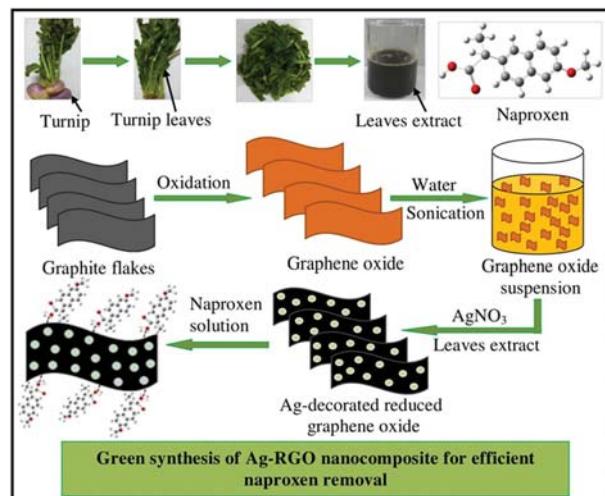
- Min Jun Oh and Pil J. Yoo 189 Graphene-based 3D lightweight cellular structures: Synthesis and applications

## CATALYSIS, REACTION ENGINEERING

- Oleksandr Shtyka, Mateusz Zakrzewski, Radoslaw Ciesielski, Adam Kedziora, Sergey Dubkov, Roman Ryazanov, Małgorzata Szynkowska, and Tomasz Maniecki Xue Li and Dongfang Wu Zhihao Si, Xin Zhang, Miao Zuo, Tao Wang, Yong Sun, Xing Tang, Xianhai Zeng, and Lu Lin
- 209 Efficient removal of the carbon deposits formed during the mixed methane reforming over Ni/Al<sub>2</sub>O<sub>3</sub>
- 216 Synthesis of Co-doped micro-mesoporous SAPO-11 zeolite for glycerol hydrogelysis
- 224 Selective oxidation of 5-formyloxymethylfurfural to 2, 5-furandicarboxylic acid with Ru/C in water solution

## ENVIRONMENTAL ENGINEERING

- Shailesh Kumar and Monoj Kumar Mondal Hadis Bashiri, Samira Nesari, and Malihe Sarabandan Xiaoling Wang, Xiaoyu Zhang, and Hai Lu Samaneh Bandehali, Abdolreza Moghadassi, Fahime Parvizian, Jiangnan Shen, and Sayed Mohsen Hosseini Somen Mondal, Surabhi Patel, and Subrata Kumar Majumder
- 231 Selection of efficient absorbent for CO<sub>2</sub> capture from gases containing low CO<sub>2</sub>
- 240 Microwave assisted production of a high performance adsorbent from rice husk
- 249 Use of nitrate-nitrogen concentration for controlling source, cellular matter production and oxygen consumption for sewage treatment
- 263 Glycidyl POSS-functionalized ZnO nanoparticles incorporated polyether-imide based nanofiltration membranes for heavy metal ions removal from water
- 274 Bio-extract assisted in-situ green synthesis of Ag-RGO nanocomposite film for enhanced naproxen removal



## BIOTECHNOLOGY

Min Jae Shin and Young Jae Shin 290 Selectivity of cholesterol-imprinted system on self-assembled monolayer

### SEPARATION TECHNOLOGY, THERMODYNAMICS

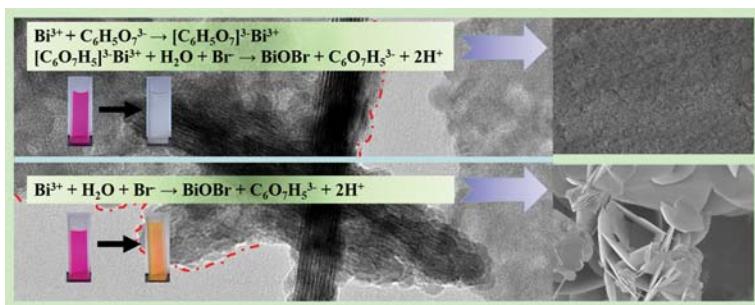
- Maryam AriaZadeh, Zahra Farashi, Navid Azizi, and Mohammad Khajouei 295 Influence of functionalized SiO<sub>2</sub> nanoparticles on the morphology and CO<sub>2</sub>/CH<sub>4</sub> separation efficiency of Pebax-based mixed-matrix membranes
- Dihua Wu, Xiru Zhang, Yujie Chen, Sanchuan Yu, and Hongting Zhao 307 Thin film composite polyesteramide nanofiltration membranes fabricated from carboxylated chitosan and trimesoyl chloride
- Mehdi Asadollahzadeh, Rezvan Torkaman, and Meisam Torab-Mostaedi 322 Study on the feasibility of using a pilot plant Scheibel extraction column for the extraction and separation of lanthanum and cerium from aqueous solution

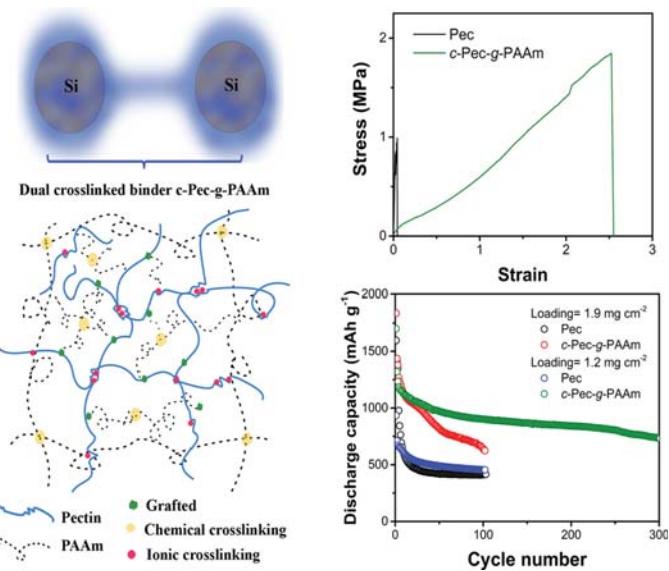


- Dongdong Wang, Yang Lu, Zhuo Sun, Wei Liang, Dongshu Sun, Changli Qi, ChengZhuo Sheng, and Xiaopeng Yu 332 Measurement and correlation of phase equilibria in aqueous two-phase systems containing ionic liquid ([EOMiM]Br) and potassium citrate/ammonium citrate/potassium tartrate at different temperatures
- Seungjun Baek, Wonhyeong Lee, Juwon Min, Yun-Ho Ahn, Dong Woo Kang, and Jae W. Lee 341 Hydrate seeding effect on the metastability of CH<sub>4</sub> hydrate

### MATERIALS (Organic, Inorganic, Electronic, Thin Films)

- Kritika Sharma, Steffi Talwar, Anoop Kumar Verma, Diptiman Choudhury, and Borhan Mansouri 350 Innovative approach of in-situ fixed mode dual effect (photo-Fenton and photocatalysis) for ofloxacin degradation
- Weiming Zhou, Yifan Jiang, Shichang Sun, Mingxin Zhang, Ibrahim Lawan, Gerard Franklyn Fernando, Liwei Wang, and Zhanhui Yuan 358 Trisodium citrate-assisted synthesis of BiOBr nanostructure catalyst for efficient activity under visible light





POLYMER, INDUSTRIAL CHEMISTRY